



# DISCO CHECK VALVES

## **SERIES**

930 | 931 | 932 | 932-HD | 936

**AWS**  
**APPARATEBAU**

# GENERAL DESCRIPTION

## DISCO CHECK VALVES



**Description and intended purpose**  
AWS disco check valves are suitable for universal use in piping systems for the transport of liquid and gaseous substances as well as in plants or environments in which particularly high demands are placed on the material. They can be installed directly between flanges (PN 6 - PN 160 or Class 150 - Class 900).

AWS disco check valves are maintenance-free.

**Function**  
AWS disco check valves require a low opening pressure. The resulting opening force pushes the disc against a spring and, if necessary, also the weight force of the disc (depending on the installation position), so that the medium can flow. If the inlet pressure drops or if the backpressure exceeds the inlet pressure, the valve closes and seals against the medium by means of the soft seat or the metal seat.

# WHY CHOOSE AWS

## DISCO CHECK VALVES?

### IN BRIEF:

- Many years of experience in the production of check valves
- In-house assembly department with maximum flexibility and expertise
- Advice and technical design via in-house design and engineering team

High availability ensuring short delivery times of standard articles

### QUALITY AND TESTING AT AWS:

- Own test benches for pressure and leak tests in accordance with EN 12266-1, API 598 and other common standards
- Experience and routine in the preparation of works and acceptance test certificates in accordance with DIN EN 10204 (2.2, 3.1 or 3.2 certificate)
- Regular auditing of processes and quality mechanisms by TÜV Süd, discerning customers and other external bodies
- In-house spectral analyses for metallic materials
- Additional quality assurance measures (external and internal), for example corrosion testing, dye penetrant testing, X-ray testing, preparation of QCPs, etc.

# OVERVIEW MATRIX

## DISCO CHECK VALVES

### DESCRIPTION

		930	931		932		932-HD	936
NOMINAL SIZES		DN 15–DN 100	DN 15–DN 100	DN 125–DN 200	DN 15–DN 100	DN 125–DN 300	DN 15–DN 100	DN 15–DN 100
FLANGE CONNECTION *1		PN 6 *2/ PN 10/PN 16/ PN 25/PN 40  Class 150 *2	PN 6/PN 10/PN 16  Class 150		PN 6 / PN 10 / PN 16 / PN 25 / PN 40  Class 150/ Class 300	PN 10 / PN 16 / PN 25 / PN 40  Class 150/ Class 300 *2	PN 63/ PN 100 / PN 160  Class 600/ Class 900	PN 10
PRESSURE		max. 40 bar	max. 16 bar		max. 50 bar		max. 160 bar	max. 10 bar
TEMPERATURE RANGES		-20 °C to +300 °C	-10 °C to +200 °C	-20 °C to +300 °C	-196 °C to +400 °C*3		-200 °C to +450 °C*3	-20 °C to +120 °C
MATERIALS AVAILABLE *4	Stainless steel	x	–	–	x	x	x	–
	Brass	–	x	–	–	–	–	–
	Alu bronze	–	–	–	x	–	–	–
	Carbon steel	–	–	–	x	x	–	–
	Superduplex	–	–	–	x	x	x	–
	Ductile iron	–	–	x	–	–	–	–
	PVC	–	–	–	–	–	–	x
	PP	–	–	–	–	–	–	x
	PVDF	–	–	–	–	–	–	x
SEALS AVAILABLE		Metal, NBR, EPDM, FKM, PTFE	Metal, NBR, EPDM, FKM		Metal, NBR, EPDM, FKM, PTFE		Metal, NBR, EPDM, FKM, PTFE	NBR, EPDM, FKM, PTFE
DIFFERENT OPENING PRES- SURES AS SPECIAL OPTION		–	–		x		x	x

\*1 other flange connections on request    \*2 not for at all nominal sizes    \*3 higher or lower temperatures on request    \*4 other materials on request

# ... AND BECAUSE WE KNOW

## WHAT MATTERS IN YOUR INDUSTRY!

**HVAC**

**Shipbuilding**

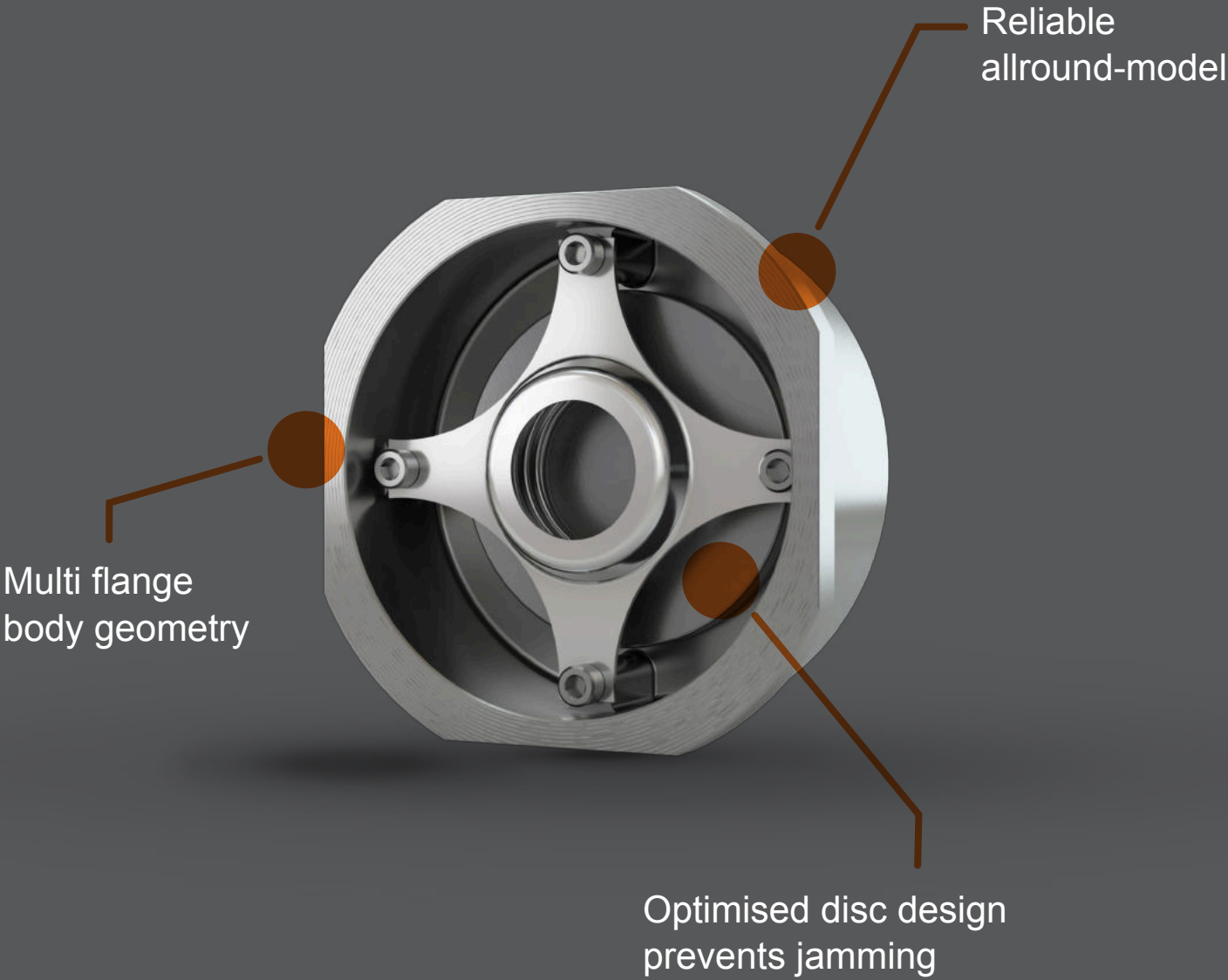
**Water and waste water**

**Refineries**

**Industrial pipeline construction**

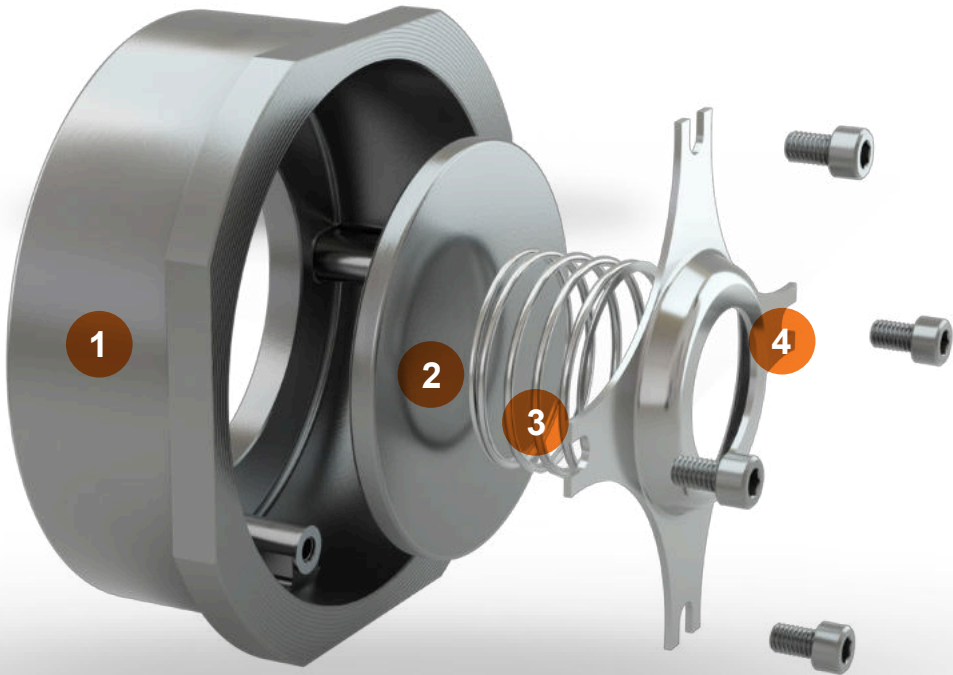
**Chemical and pharma industry**

TECHNICAL DATA  
DISCO CHECK VALVE | SERIES 930



**Nominal sizes**  
DN 15 - DN 100  
**Flange connection**  
PN 6 - PN 40 | Class 150  
**FTF (face-to-face) dimensions**  
DIN EN 558, Series 49  
**Temperature range**  
-20 °C to +300 °C

TECHNICAL DATA  
DISCO CHECK VALVE | SERIES 930



- 1. Body
- 2. Disc
- 3. Spring
- 4. Spring cross

Design	Body	Disc	Spring cross	Spring	Pressure range*1
1	1.4408	1.4408 *2	1.4436	1.4436	0 to max. 40 bar

\*1 max. allowable pressure is dependent on the temperature  
\*2 soft sealing valve with disc made of 1.4571

Nominal size	Suitable flanges					
	PN 6	PN 10	PN 16	PN 25	PN 40	ANSI 150
DN 15	-	x	x	x	x	-
DN 20	x	x	x	x	x	-
DN 25	x	x	x	x	x	-
DN 32	-	x	x	x	x	-
DN 40	x	x	x	x	x	-
DN 50	x	x	x	x	x	x
DN 65	x	x	x	x	x	-
DN 80	x	x	x	x	x	x
DN 100	x	x	x	x	x	x

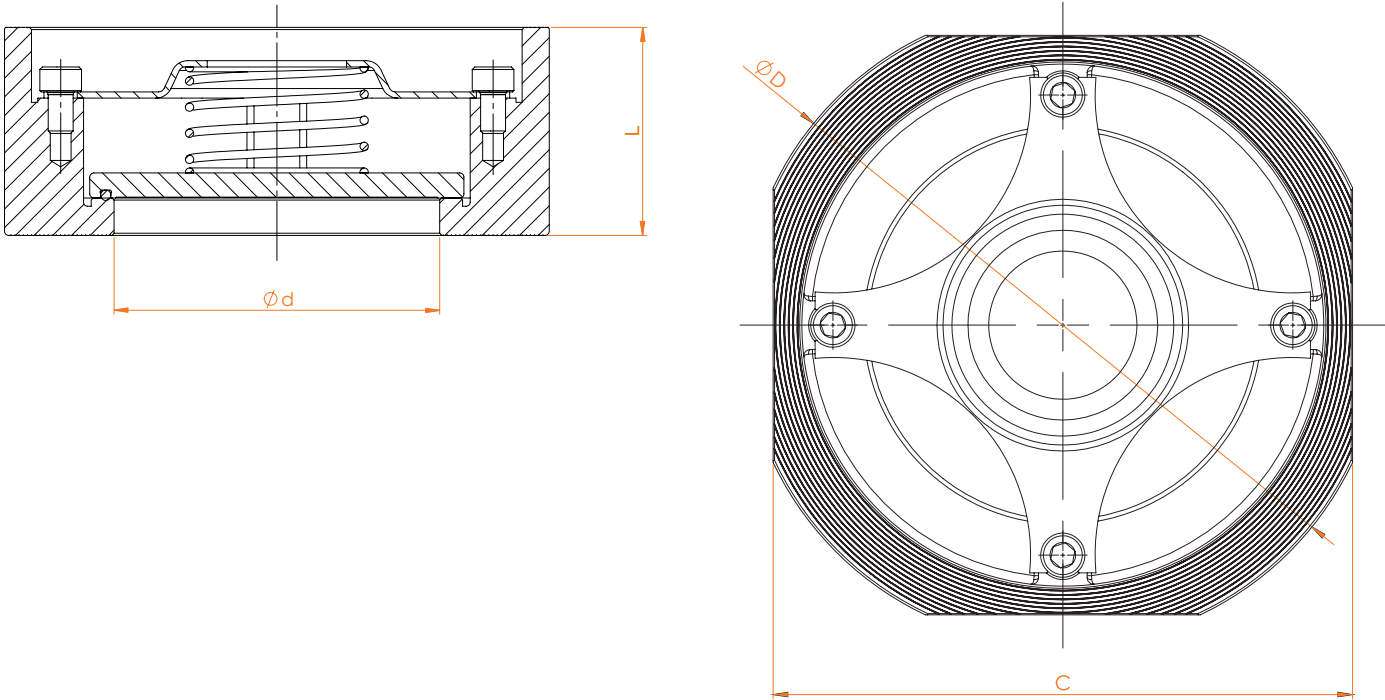
Seal	Temperature	Leakage rate*3
Metal seated	-20 °C to +300 °C	≥G
NBR	-20 °C to +100 °C	A
EPDM	-20 °C to +150 °C	A
FKM	-15 °C to +200 °C	A
PTFE	-20 °C to +250 °C	A

\*3 acc. to EN 12266-1



TECHNICAL DATA

DISCO CHECK VALVE | SERIES 930



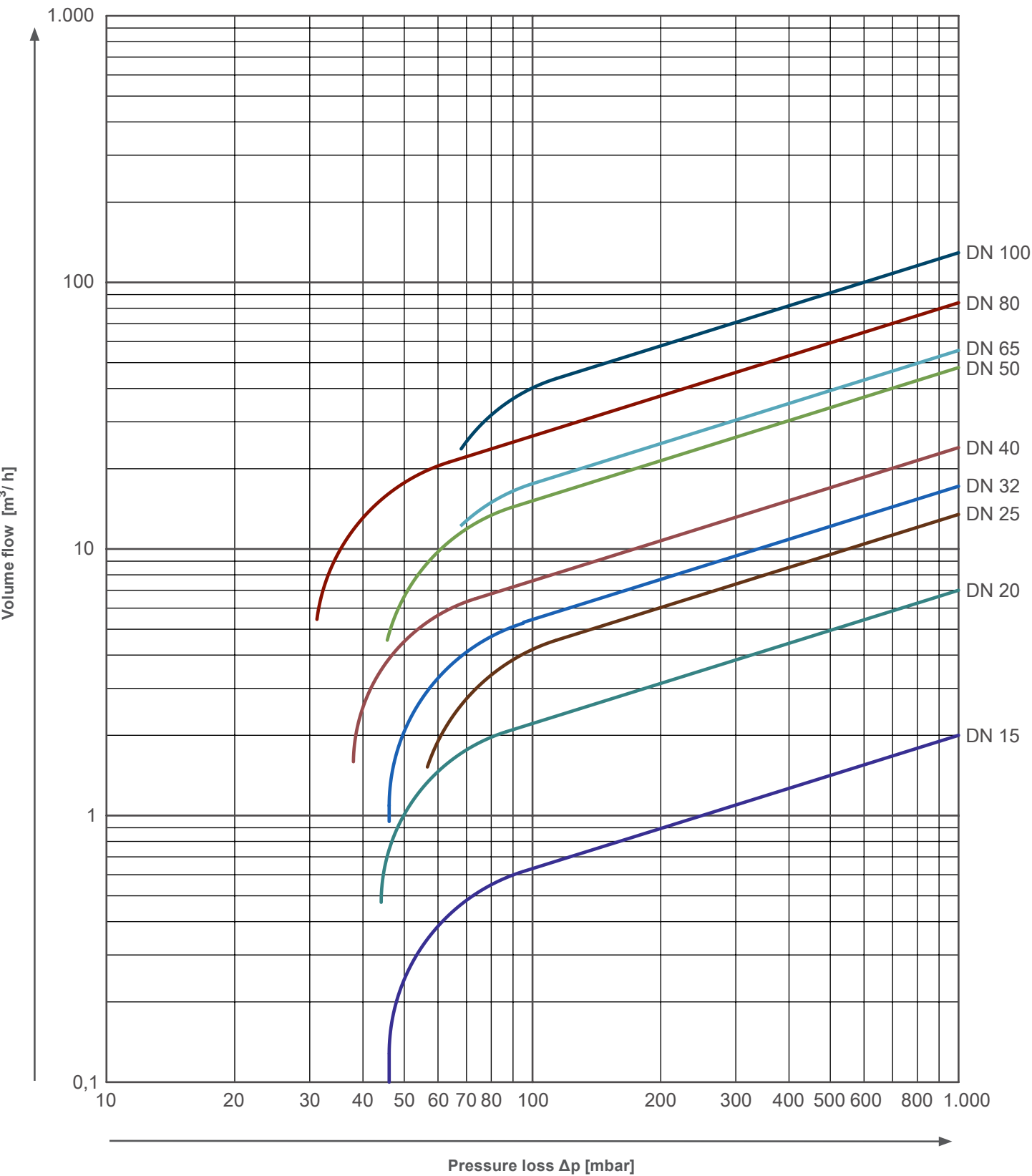
Nominal size	Ø D	Ø d	C	L	Kv value [m³/h]	Opening pressure [mbar]			w/o spring ↑	Weight [kg]
						↔	↑	↓		
DN 15	53	15	43	16	2	~ 47	~ 51	~ 43	~ 4	0.10
DN 20	63	20	53	19	7	~ 44	~ 48	~ 40	~ 4	0.16
DN 25	73	25	63	22	13	~ 57	~ 61	~ 53	~ 4	0.28
DN 32	84	30	75	28	17	~ 47	~ 52	~ 42	~ 5	0.52
DN 40	94	38	86	31.5	23	~ 38	~ 43	~ 33	~ 5	0.70
DN 50	107	47	95	40	48	~ 45	~ 52	~ 38	~ 7	1.10
DN 65	126	62	115	46	55	~ 50	~ 55	~ 45	~ 5	1.58
DN 80	145	77	131	50	83	~ 31	~ 38	~ 24	~ 7	1.78
DN 100	164	96	150	60	127	~ 55	~ 65	~ 45	~ 10	3.30

TECHNICAL DATA

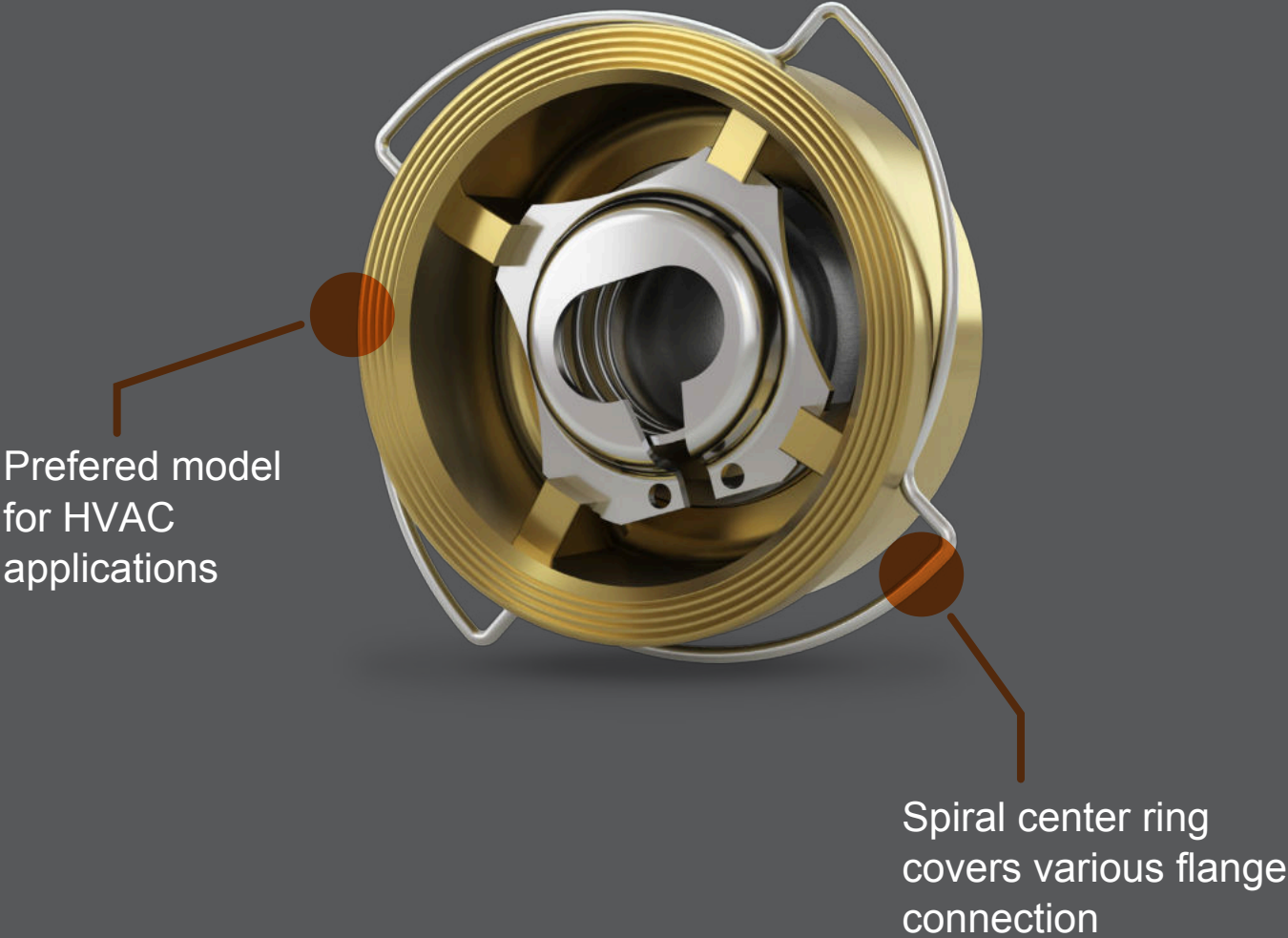
DISCO CHECK VALVE | SERIES 930

Pressure-Loss Diagram Type 930

The diagram values are valid for water at a temperature of 20 °C and for valves with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 - PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculations for other fluids or temperatures, please contact us.

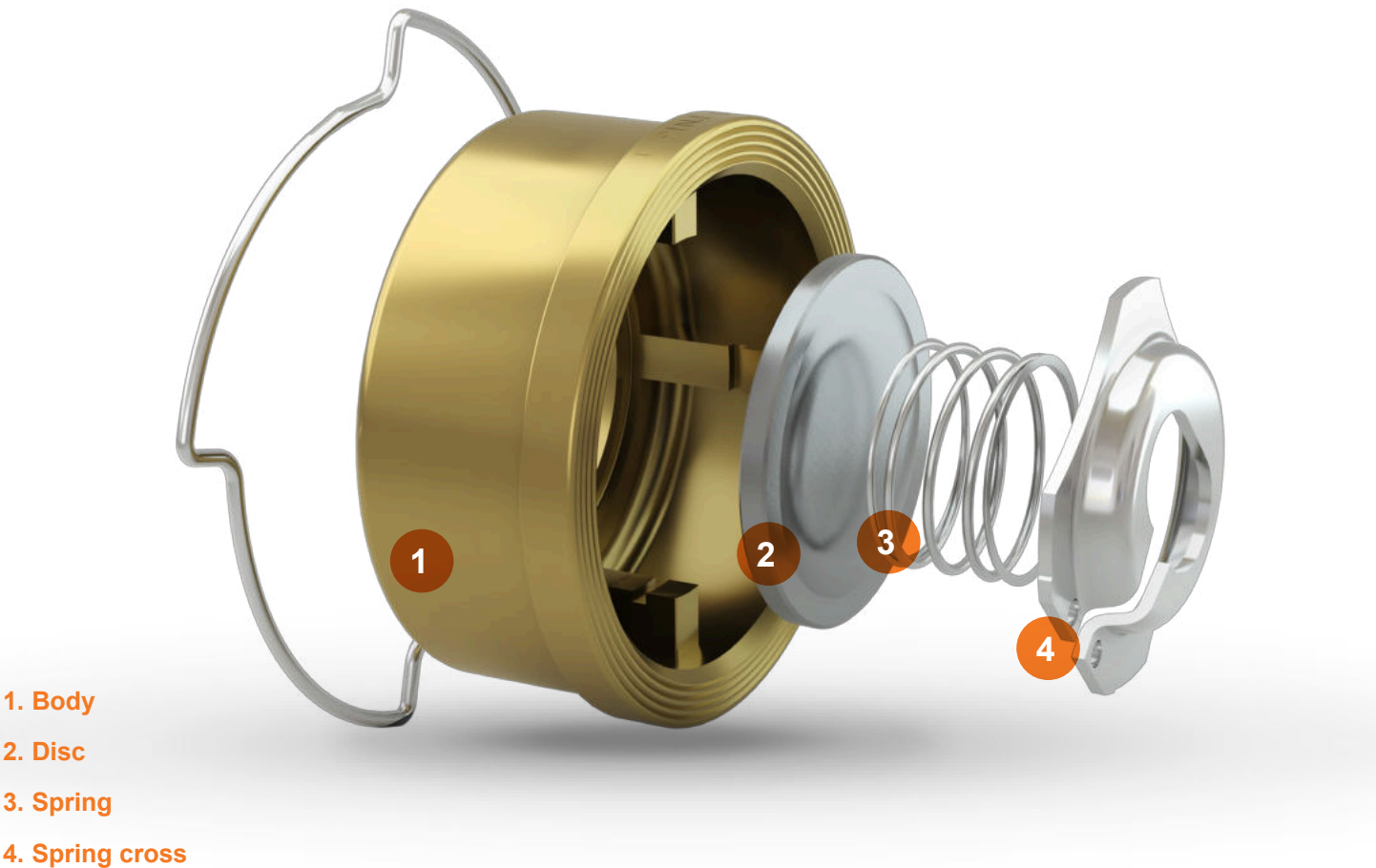


TECHNICAL DATA  
DISCO CHECK VALVE | SERIES 931



**Nominal sizes**  
DN 15 - DN 100  
**Flange connection**  
PN 6 - PN 16 | Class 150  
**FTF (face-to-face) dimensions**  
DIN EN 558, Series 49  
**Temperature range**  
-10 °C to +250 °C

TECHNICAL DATA  
DISCO CHECK VALVE | SERIES 931



Design	Body	Disc	Spring cross	Spring	Pressure range*1
3	CW617N (2.0402)	1.4301	1.4301	1.4401	0 to max. 16 bar

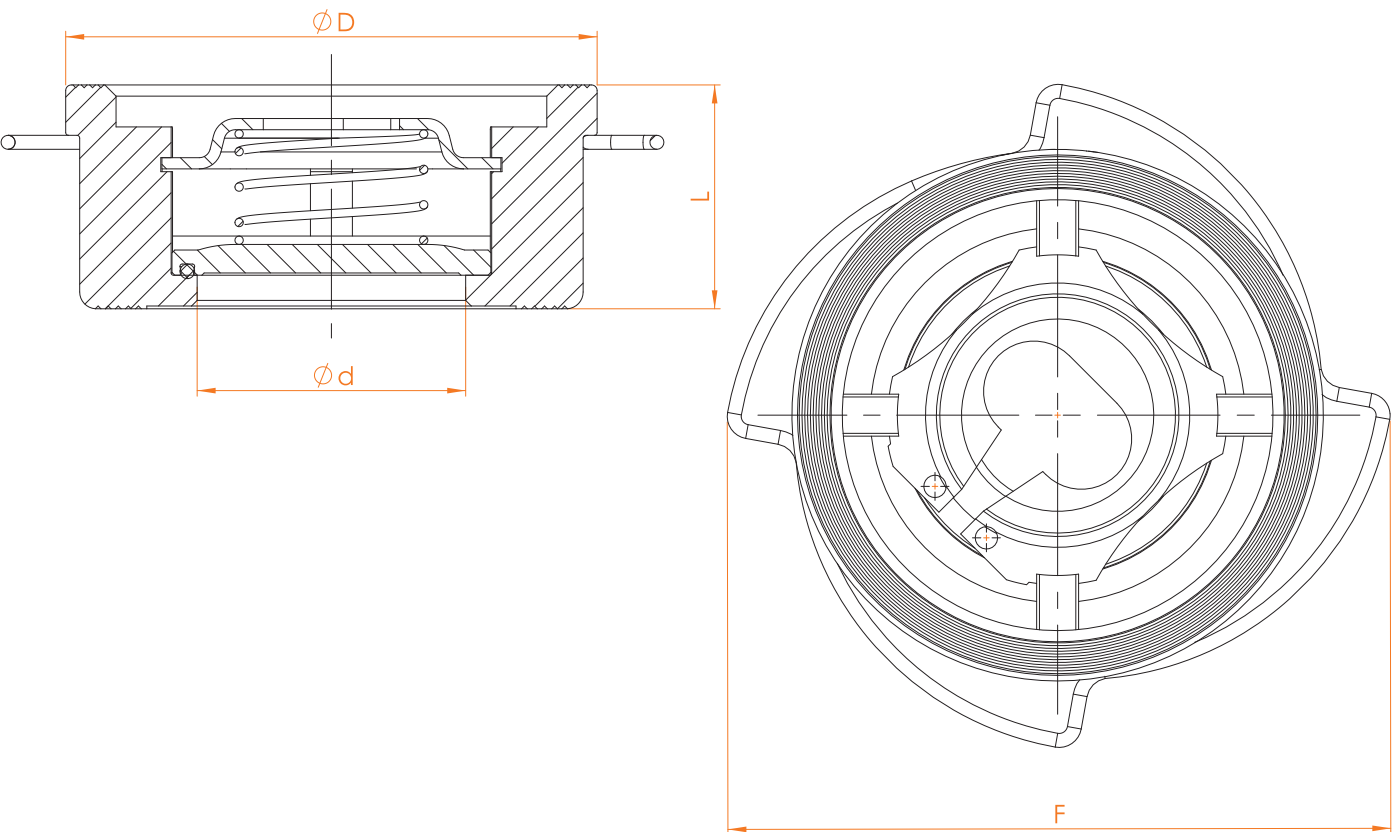
\*1 max. allowable pressure is dependent on the temperature

Seal	Temperature	Leakage rate*2
Metal seated	-10 °C to +250 °C	≥G
NBR	-10 °C to +90 °C	A
EPDM	-10 °C to +120 °C	A
FKM	-10 °C to +200 °C	A

\*2 acc. to EN 12266-1

TECHNICAL DATA

DISCO CHECK VALVE | SERIES 931



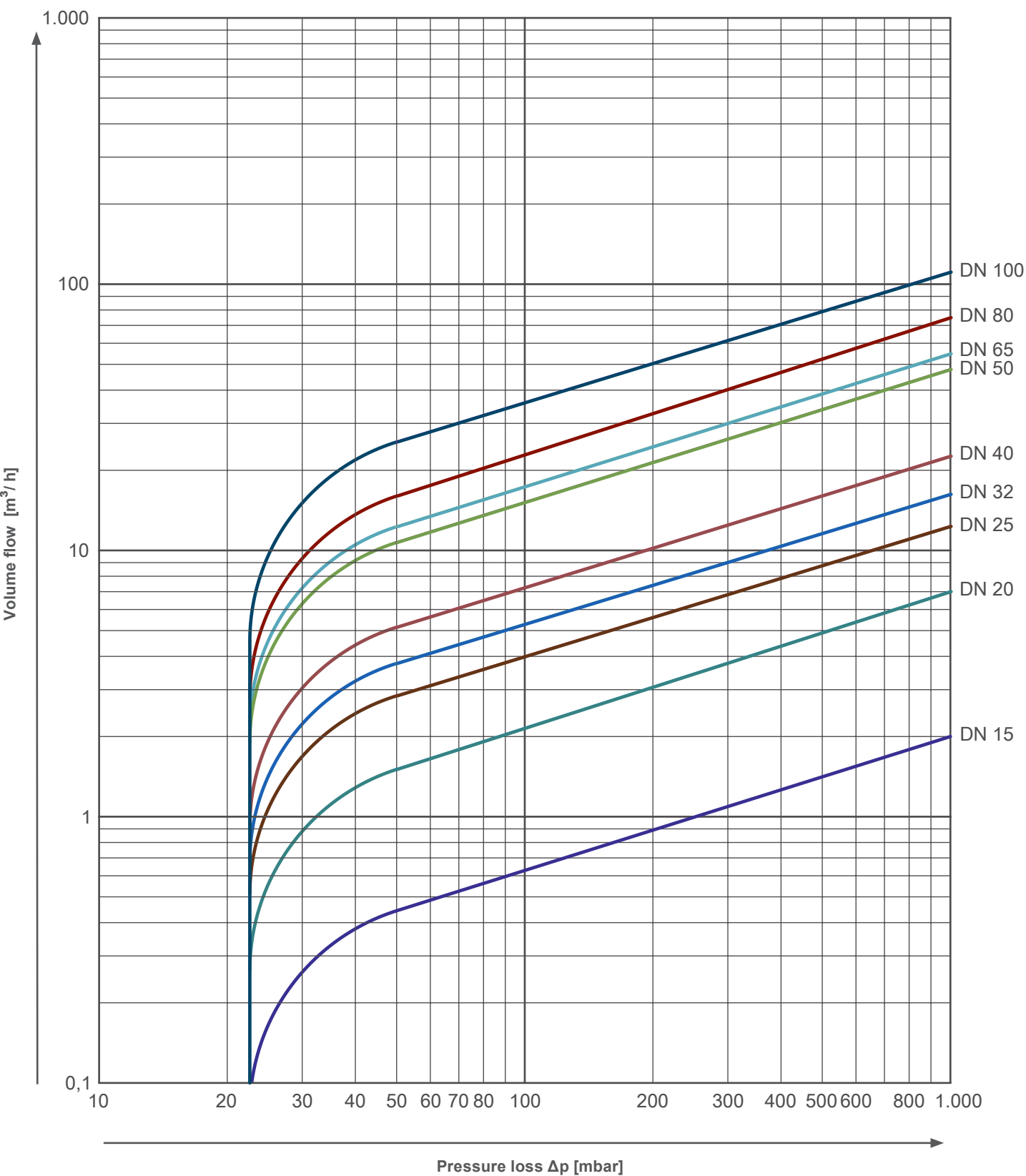
Nominal size	Ø D	Ø d	F	L	Kv value [m³/h]	Opening pressure [mbar]			w/o spring	Weight [kg]
						↔	↑	↓		
DN 15	40	15	65	16	2	~ 21	~ 24	~ 18	~ 3	0.09
DN 20	47	20	76	19	7	~ 21	~ 24	~ 18	~ 3	0.13
DN 25	56	25	86	22	13	~ 21	~ 24	~ 18	~ 3	0.20
DN 32	72	31.5	92	28	17	~ 21	~ 24	~ 18	~ 3	0.46
DN 40	82	39	107	31,5	23	~ 21	~ 25	~ 17	~ 4	0.62
DN 50	95	48	123	40	48	~ 21	~ 25	~ 17	~ 4	0.78
DN 65	115	64	148	46	55	~ 21	~ 26	~ 16	~ 5	1.4
DN 80	132	74	158	50	75	~ 21	~ 27	~ 15	~ 6	2.1
DN 100	152	89	186	60	115	~ 21	~ 28	~ 14	~ 7	3.0

TECHNICAL DATA

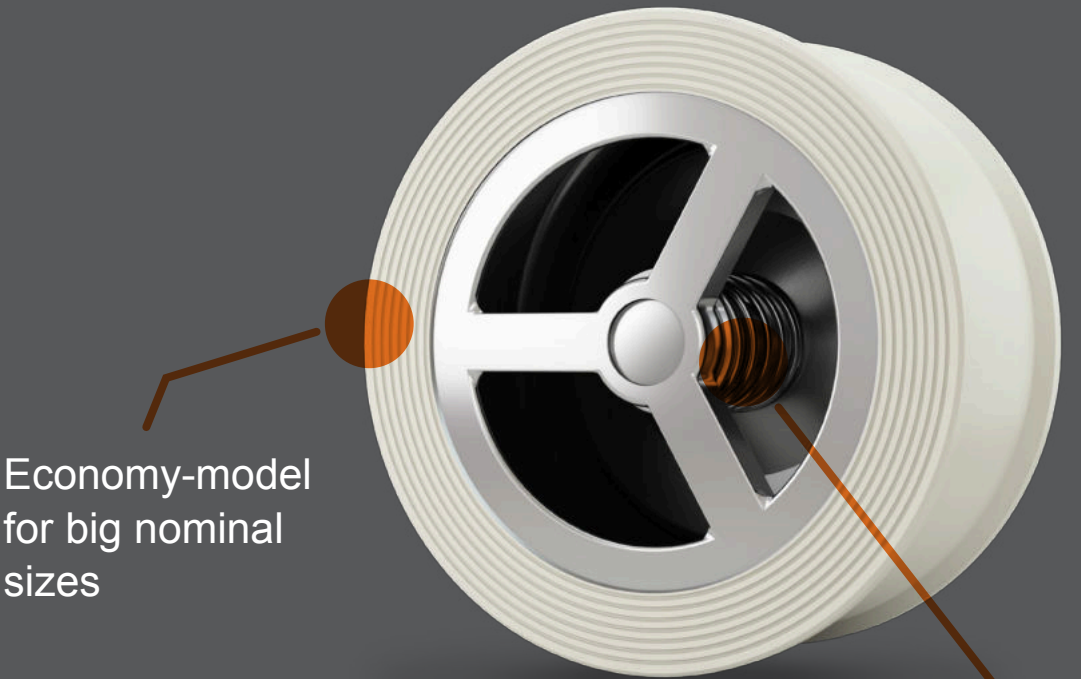
DISCO CHECK VALVE | SERIES 931

**Pressure-Loss Diagram Typ 931**

The diagram values are valid for water at a temperature of 20 °C and for valves with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 - PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculations for other fluids or temperatures, please contact us.



TECHNICAL DATA  
DISCO CHECK VALVE | SERIES 931



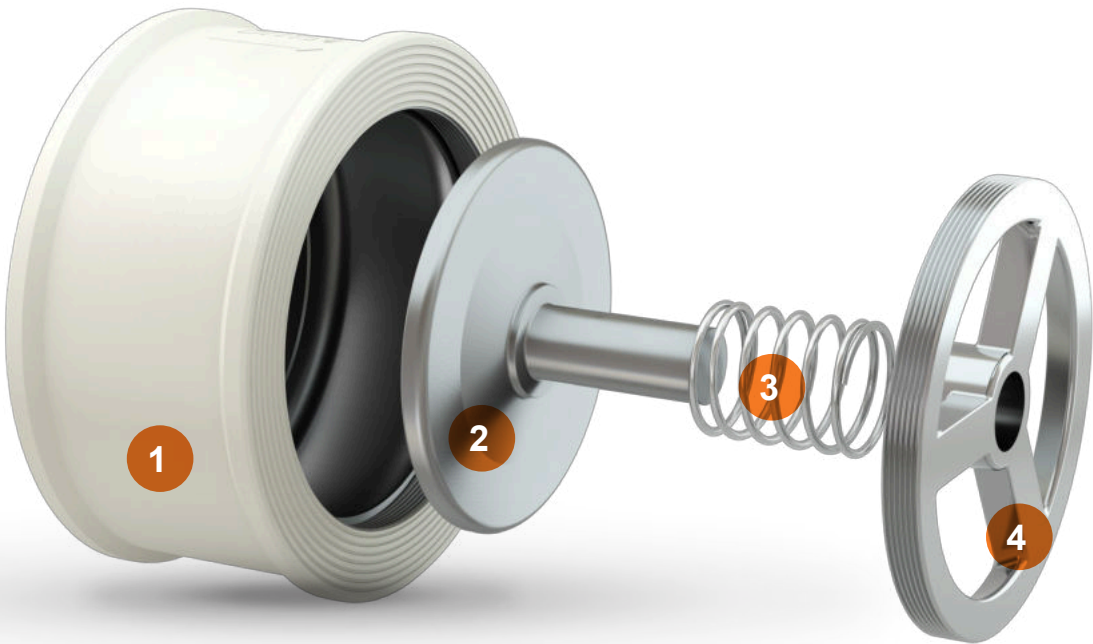
Economy-model  
for big nominal  
sizes

High operational  
reliability by guided disc



**Nominal sizes**  
DN 125 - DN 200  
**Flange connection**  
PN 6 - PN 16 | Class 150  
**FTF (face-to-face) dimension**  
DIN EN 558, Series 49  
**Temperature range**  
-20 °C to +300 °C

TECHNICAL DATA  
DISCO CHECK VALVE | SERIES 931



- 1. Body
- 2. Disc
- 3. Spring
- 4. Spring cross

Design	Body	Disc	Spring cross	Spring	Pressure range*1
9	EN-GJS-400-18-LT (GGG40.3)	EN-GJS-400-18-LT (GGG40.3)	1.4408	1.4571	0 to max. 16 bar
9.1	EN-GJS-400-18-LT (GGG40.3)	1.4308	1.4408	1.4571	0 to max. 16 bar

\*1 max. allowable pressure is dependent on the temperature

Seal	Temperature	Leakage rate*2
Metal seated	-10 °C to +250 °C	≥G
NBR	-10 °C to +90 °C	A
EPDM	-10 °C to +120 °C	A
FKM	-10 °C to +200 °C	A

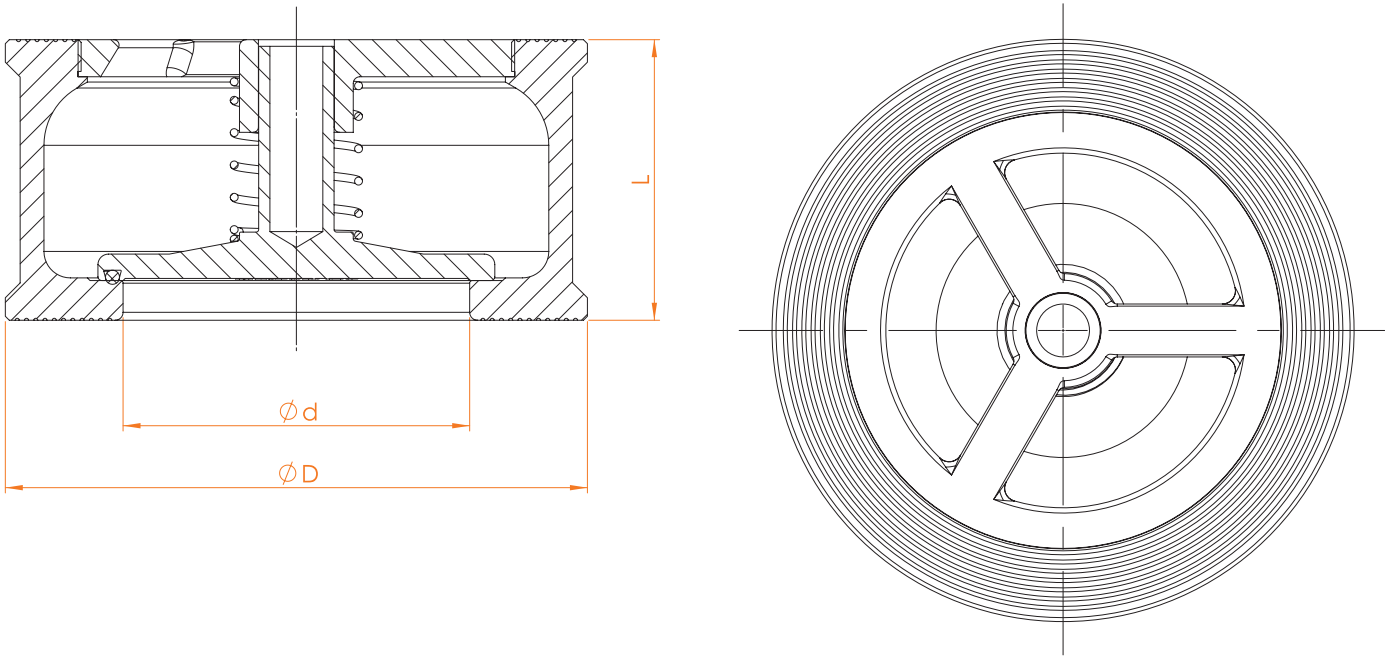
\*2 acc. to EN 12266-1

**Seals comply with the following approvals / conformities:**  
NBR: DIN EN 549, BAM, REACH, RoHS etc.  
EPDM: KTW UBA, DVGW W 270, WRAS, NSF, FDA, BfR XXI Kat. 4, ADI-free, 3A, USP Cl. 6, BAM, REACH, RohS etc.  
FKM: REACH, RoHS etc.



TECHNICAL DATA

DISCO CHECK VALVE | SERIES 931



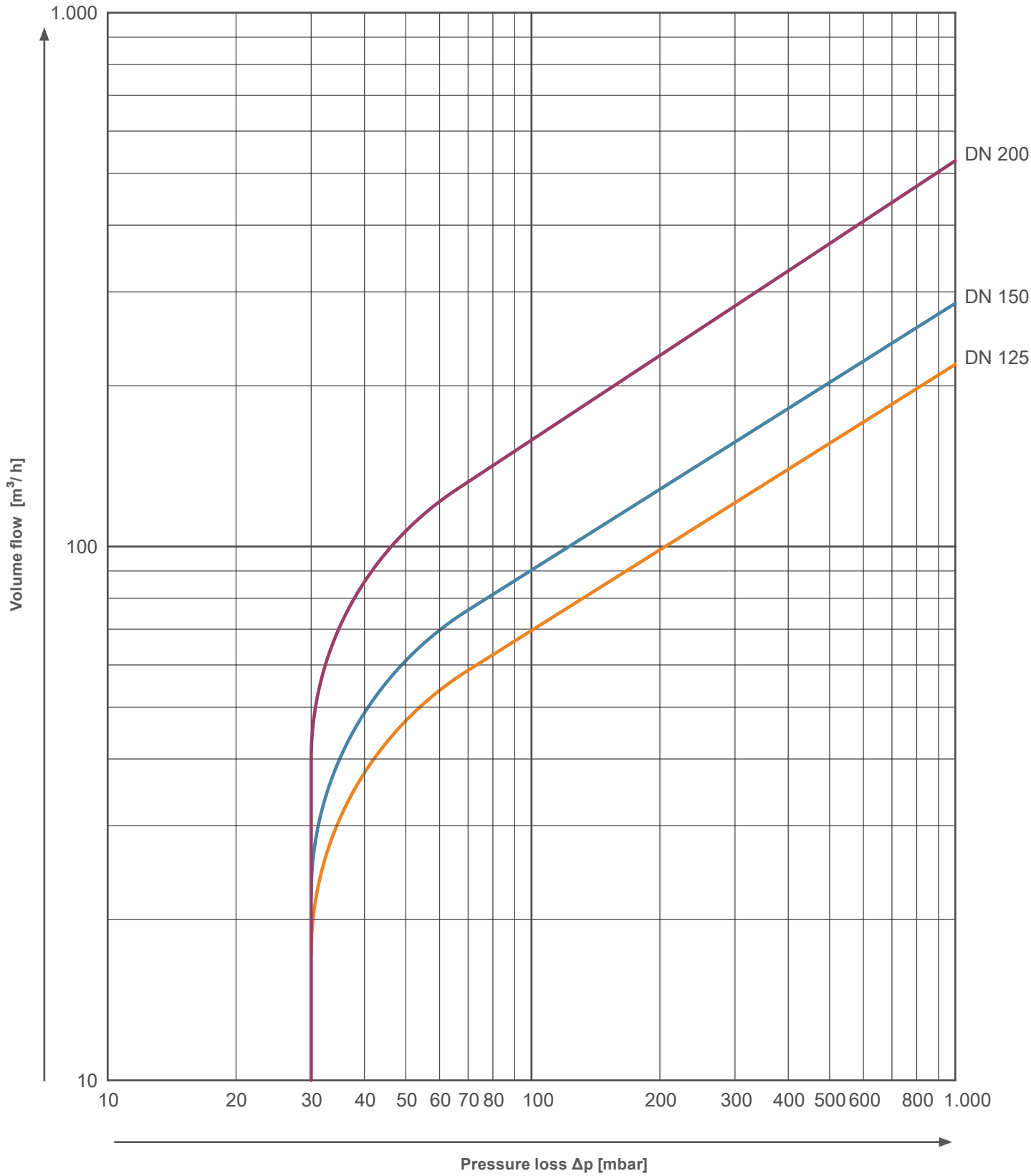
Nominal size	Ø D			Ø d	L	Kv value [m³/h]	Opening pressure [mbar]			w/o spring ↑	Weight*3 [kg]
	PN 6	PN 10 / 16	150 lbs				↔	↑	↓		
DN 125	183	194	194	112	90	222	~ 30	~ 39	~ 21	~ 9	7.2
DN 150	208	220	220	131	106	288	~ 30	~ 41	~ 19	~ 11	10.8
DN 200	263	275	275	175	140	530	~ 30	~ 42	~ 18	~ 12	18.9

\*3 weight may vary slightly, depending on the design

TECHNICAL DATA

DISCO CHECK VALVE | SERIES 931

**Pressure-Loss Diagram Type 931**  
The diagram values are valid for water at a temperature of 20 °C and for valves with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 - PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculations for other fluids or temperatures, please contact us.





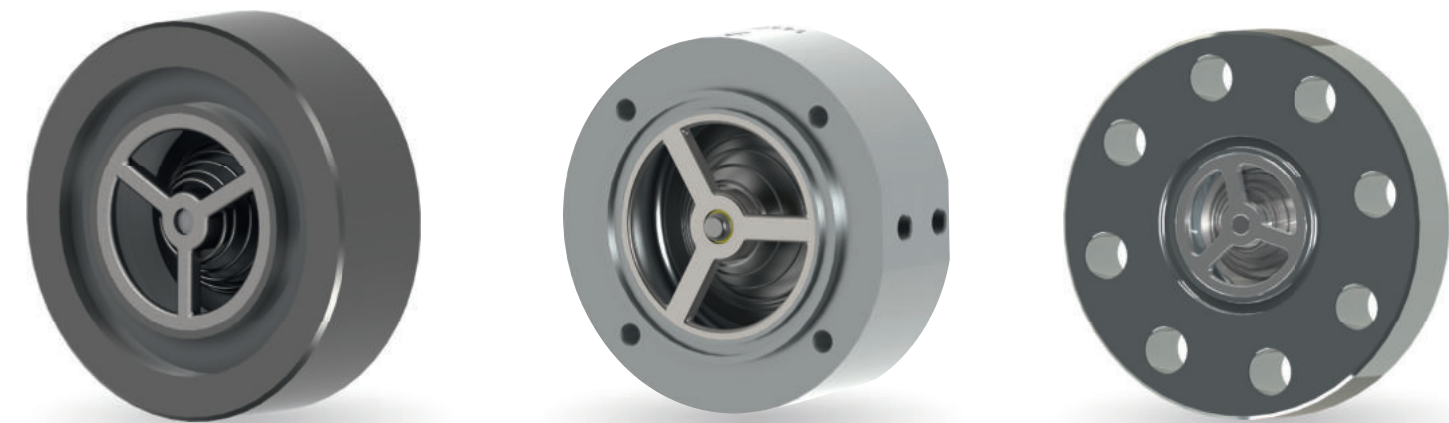
# SPECIAL OPTIONS

## DISCO CHECK VALVES

With many years of experience and our understanding of the demands of the market and the constantly rising expectations of our customers, we always strive to develop and implement solutions that go well beyond the standard. Here are just a few examples of special designs that we have created either in-house, based on our standard models, or with the help of our long-standing pool of partners. Here we adhere to the criteria of technical and economic feasibility combined with a healthy dose of pragmatism.



### Various special bodies

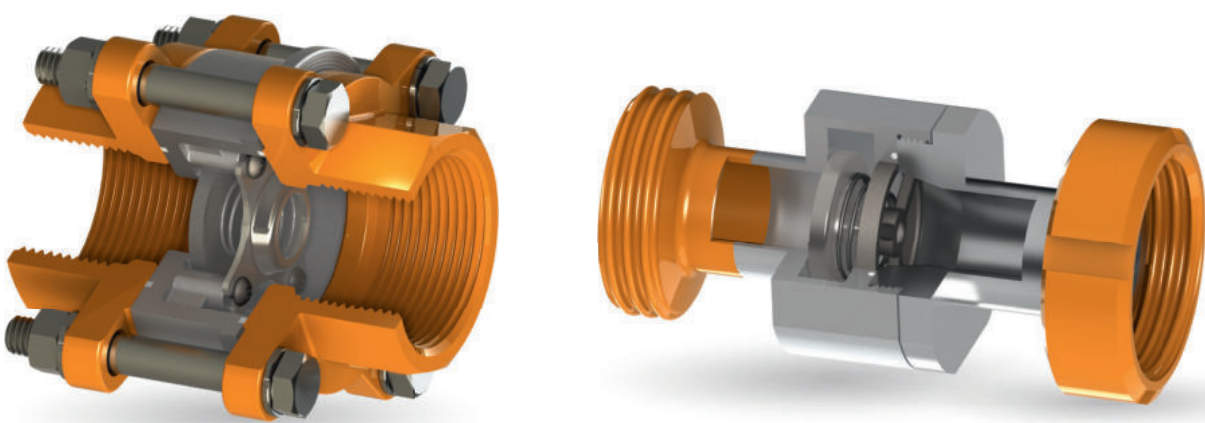


With various forms of flange sealing surfaces acc. to diverse standards

With thread holes

With lug type body

### With mounted connecting pieces for thread connections



#### Other special options:

- Special opening pressure (type 932, 932-HD, 936)
- Cleaned free of oil and grease
- Cleaned free of silicone
- Cleaned free of PWIS

- Seals with additional approvals which go beyond the standard
- Metal seated with reduced leakage rate acc. to DIN EN 12266-1 (type 932, 932-HD)

- Seal glued in for vacuum applications
- Other materials on request
- Other flange dimensions on request
- Other special options on request



With attached ground cable



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